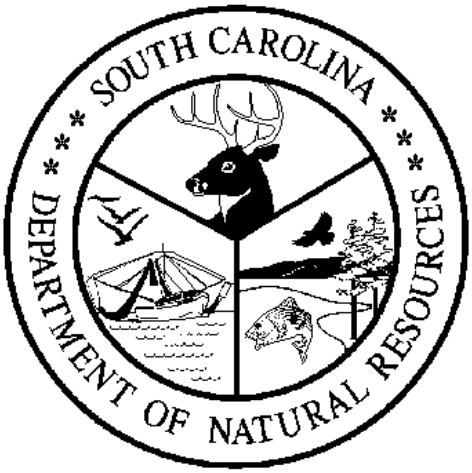
Management Plan
for
Congaree Bluffs Heritage Preserve



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Department of Natural Resources

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INTRODUCTION

South Carolina Code of Law mandates that the South Carolina Department of Natural Resources (SCDNR) prepare management plans for heritage preserves [S.C. Code Ann. §51-17-80.5 (Supp. 1995)]. These plans detail management objectives, constraints, and strategies for heritage preserves and seek to accurately address both current and future management needs. Changing socio-ecological conditions require these management plans periodically be updated; moreover, the SCDNR requires these plans be reviewed and/or updated no less than every 5 years or as needed to meet the preserve's management goals. The Congaree Bluffs Heritage Preserve (CBHP) was acquired with the invaluable assistance of South Carolina State Representative Harry Ott, the Calhoun County Conservation Commissioners, the Congaree Land Trust, The Nature Conservancy, and the Friends of Congaree Swamp. This preserve would not exist without their assistance.

Directions to the Congaree Bluffs Heritage Preserve

Directions to the preserve from Columbia: Take I-26 E to Exit 119 (US 21 S/US 176 E); turn right at the end of the ramp; travel 14.2 miles on US 176 (US 21 will bear off to the right at mile 7); turn left on State Secondary Road (SSR) 24 (S-9-24); travel 7.1 miles; turn left on SSR 25 (S-9-25); travel 4.5 miles; turn left on Turkey Track Lane (dirt road); follow Turkey Track Lane for ~1 mile to the preserve's parking lot. Refer to Figure 1.

Directions to the preserve from Charleston: Take I-26 W to Exit 145 (US 601); travel north on US 601 ~9 miles; turn left on SC 419; follow SC 419 for 2.5 miles to the railroad tracks in Fort Motte; cross tracks and continue straight for ~1 mile; turn right on Turkey Track Lane (dirt road); follow Turkey Track Lane for ~1 mile to the preserve's parking lot.

Directions to the education center: continue approximately 0.5 mile past the preserve entrance, then bear left and go approximately 0.3 mile to the education center.

OBJECTIVES

Primary Objective

The Heritage Trust Act defines the primary management objective of all heritage preserves is to "…protect the natural or cultural character of any area or feature…" for which the property was dedicated. [S.C. Code Ann. §51-17-80.1 (Supp. 1995)]. Congaree Bluffs Heritage Preserve was established by the SCDNR's Heritage Trust Program (HTP) to protect the bluffs that border the Congaree River and Congaree flood plain. According to Dr. John B. Nelson (unpub. 1986; Appendix A), Chief Curator of the A. C. Moore Herbarium at University of South Carolina, these bluffs warrant protection because they lack man-related disturbances and have general forest maturity. He further stated in his February 25, 1987 unpublished memorandum (Appendix B) that the bluffs are of "unquestionable regional natural significance" because of their size,

extent, location within the Piedmont and the limits of the Atlantic Coastal Plain, and because they serve as a buffer for the Congaree Swamp National Park. The primary objective of this plan is to conserve and enhance the integrity of the bluffs, associated natural communities, and protect both the natural and cultural resources that are found on Congaree Bluffs Heritage Preserve.

Secondary Objective

The Heritage Trust Act mandates that heritage preserves be managed "to provide the maximum public usage ... which is compatible and consistent with the character of the area" [S.C. Code Ann. §51-17-40.7 (Supp. 1995)]. Within the constraints imposed by the primary objective, CBHP will provide recreational opportunities such as fishing, hiking, plant and wildlife observation and photography. The preserve will also provide opportunities for research and serve as an outdoor classroom for nature study. The preserve contains a house with a three-car garage, which will be used as a SCDNR office and an environmental and cultural education center.

HISTORY AND CURRENT DESCRIPTION

History

This tract of land was almost lost to "development." The former owner planned to subdivide the property into individual tracts. One lot was sold before the HTP acquired the remainder. The Mefford family acquired this lot. The Mefford's share ownership with SCDNR in a common area hereafter denoted as the "Bluff-River Walk Trail" (Figure 2). It contains a steep unimproved road leading to a primitive boat landing. This area has been stabilized and converted to a "foot access only" trail. South Carolina Department of Natural Resources and its partners worked together to get the tract off the market and held it until the HTP was able to purchase the property. The HTP acquired the property from Mr. James Sarvis on July 19, 2001 with proceeds from the Heritage Land Trust Fund. All earnest money was returned to the partners. The property was dedicated as a heritage preserve on August 10, 2001.

Current Description

Congaree Bluffs Heritage Preserve encompasses 201 acres along the Congaree River in Calhoun County directly across the river from Congaree Swamp National Park. Calhoun County lies in the center of the state in the upper coastal plain and the Congaree River forms the county's northern boundary. Refer to Figure 3.

The preserve's elevation ranges from 90 feet above mean sea level (MSL) in the floodplain, to 262 feet above MSL at the center of the preserve. At one of its steepest points, on the upriver section of the preserve, the bluff rises 120 feet over a horizontal distance of only approximately 230 feet (52% slope). The preserve lies at 33^0 45' 12" N latitude 80^0 42' 09" W longitude and is depicted on the Fort Motte and Wateree USGS quadrangle maps (Figure 4).

This property contains relatively flat uplands, steep ravines and bluffs, and a flat flood plain of the Congaree River. In 1948, approximately 50 acres of the uplands were converted to agricultural fields (Figure 5). Between 1948 and 1999, approximately 100 acres of the property were planted in loblolly pines (*Pinus taeda*) (Figure 6). The ravines and bluffs comprise approximately 75 acres of the property.

The preserve's upland soils are in the Lakeland-Vaucluse-Killian edaphic association (Lakeland sand, Eustis sand, mixed alluvial land, sandy and clayey land) and its floodplain and cove soils are in the Congaree-Chewacla-Wehadkee edaphic association (Congaree silt loam series) (USDA SCS 1963).

The following are examples of wildlife that can be seen on this preserve: white-tailed deer (*Odocoileus virginianus*), Eastern wild turkey (*Meleagris gallopavo*), Northern bobwhite quail (*Colinus virginianus*), raccoon (*Procyon lotor*), opussum (*Didelphis virginiana*), and a variety of migratory birds.

Outstanding Natural Features

Bluff Ecosystem

The ecological significance and interesting aspect/topographic/edaphic/hydrologic inter-relationships of northern-facing bluffs along the south bank of the Congaree River were first recognized and documented by Dr. Wade T. Batson and colleagues (Fitzpatrick et al. 1977). They documented 100 species of plants representing 53 families (their study centered on 2 bluffs near and similar to, but not within the preserve). They ecologically described the bluffs as a Beech Ravine community of the Southern Mixed Hardwood Forest, according to the Querterman and Keever (1962) classification system. The bluffs on the CBHP fit this community description. The preserve's bluffs also fall into Nelson's (1986) *The Natural Communities of South Carolina: Initial Classification and Description*, a Mesic Mixed Hardwood Forest (a.k.a. Beech Ravine).

Although this forest type covers a sizeable area in the southeast, its extent and ecological integrity have been greatly reduced by developers and other land disturbances. The typical overstories contain mixtures of American beech (*Fagus grandiflora*), oaks (*Quercus spp*.), tulip-poplar (*Liriodendron tulipiferea*), and hickories (*Carya spp*.), while the understory typically contains a mixture of red maple (*Acer rubrum*), flowering dogwood (*Cornus florida*), strawberry bush (*Euonymus americana*), and red buckeye (*Aesulus pavia*).

Fitzpatrick et al's. seminal work led to further studies of a wider range of bluffs, along the Congaree River, by Dr. John Nelson (unpubl. 1986; Appendix A). Nelson's report described and documented the ecological significance of 7 separate bluffs comprising approximately 850 acres along the south bank of the Congaree River. Although there are similar sites located throughout the United States, the Congaree Bluffs are the only bluff complex that is located completely within the Piedmont and the limits of the Atlantic Coastal Plain (Nelson, unpub. 1986). This study includes the bluff that is mostly (unable to purchase the Mefford's lot) protected by the preserve (bluff

Area #6 in the report).

Bottomland Hardwood Forest Ecosystem

Although only a few acres of bottomland hardwood forest are located on the preserve, they are located across the river from the Congaree Swamp National Park, which increases the ecological significance of this preserve. One facet of the educational mission of the preserve is to highlight the ecological benefits of forested wetlands and old growth forests.

Forested wetlands declined by 50% in the United States between the 17th and 19th centuries (Rudis 1995). Bottomland hardwood forests, which are ecosystems distributed along rivers and streams in the central and southern United States, are the most rapidly declining wetland type in the United States (King 2000). Turner et al. (1981) reported that from 1960-1975, 30,000 acres of bottomland hardwoods in the Carolinas were lost annually. Cely and Ferral (1990) found that 25% of the 190,000 acre Santee River Swamp system had been clearcut between 1979-1989 (40 year-rotation).

Bottomland hardwood forests have been lost or degraded by channelization, dams, urban development, clearing for agriculture (King 2000) and pine plantations, short rotation hardwood silviculture (Kellison et al. 1988), pollution, and fragmentation. All else equal, species numbers decrease as fragmentation increases (Rudis 1995). Although some industrial forests are managed for bottomland hardwoods, rotations are short, stands tend to be even-aged, and canopy gaps and coarse woody debris are not valued. Kellison et al. (1988), in a document published by the American Pulpwood Association, stated: "Bottomland hardwood stands that are financially mature or understocked should be regenerated. Age of financial maturity varies with different management objectives but is about 40 years for pulpwood and 60 years for sawtimber at today's costs and prices."

Intact bottomland hardwood forests provide significant ecosystem benefits. They remove major percentages of sediments and pollutants (Kuenzler 1989). Kitchens et al. (1975) found that water turbidity was reduced as floodwaters moved across the Santee River floodplain, and that 50% of the phosphate and total phosphorus in solution was removed during winter flooding of the Wateree River. Bottomland hardwood forests also help prevent floods and lessen the effects of drought by regulating water flow. Moreover, they provide critical wildlife habitat and areas where people can enjoy solitude and a sense of isolation.

MANAGEMENT GUIDELINES

Desired Future Condition

The Desired Future Condition (DFC) is a term used to express visionary and pragmatic ideas about ecosystem futures. It encompasses the potential for human use woven together with the natural resource or ecological legacy and condition that will

exist as a result of attaining mutually compatible resource objectives (Caplan 1992).

The DFC for CBHP is an intact, restored, self-regulating bluff and bottomland hardwood forest, and an upland longleaf pine (*P. palustris*) ecosystem. Greater than 95% of bottomland hardwood forests in coastal plain South Carolina are in private ownership (John Cely, 2000, SCDNR, personal communication) and private landowners face financial disincentives (e.g. taxes) to allow trees to become senescent; consequently, these mature forests are more likely to develop on public lands such as heritage preserves.

Upland Longleaf Pine Ecosystem Restoration

According to the Longleaf Alliance (Franklin 1997), the longleaf pine's range once extended from southeastern Virginia to central Florida, westward to east Texas. It consisted of almost 90 million acres. Currently, longleaf pine forests only make up 3 million acres in the southeast. During the 1770s, naturalist William Bartram (*Bartram* 1955) described one of these vast longleaf forests as a "… level open, airy pine forest, the stately trees scatteringly planted by nature, arising straight and erect from the green carpet, embellished with various grasses and flowering plants." The DFC includes converting approximately 100 acres of the preserve's upland loblolly pine (*P. taeda*) plantation to a longleaf pine ecosystem (Figure 6). Forest management activities will be coordinated with the South Carolina Forestry Commission (SCFC), and will, as a minimum, adhere to the SCFC's Best Management Practices (SCFC 1995). Timber harvesting will primarily be for ecological purposes. McKee et. al. (1985) states that ground surface disturbances by reforestation activity to areas that were formerly agricultural fields are not usually a critical factor.

Site preparation to manage competing vegetation may be necessary to ensure adequate longleaf pine survival. Site preparation, whether chemical or mechanical, shall be implemented with great care to protect both natural and cultural resources while maximizing restoration benefits. The herbaceous component in the longleaf pine ecosystem is critical and careful evaluation will be made to determine the need for any native grasses or other herbaceous restoration.

The SCDNR and the Calhoun County Museum and Cultural Center have entered into a partnership that will incorporate their 5-acre inholding of land into the upland management strategy of this preserve.

The heritage preserve manager in consultation with the SCDNR Heritage Trust Archeologist (HTA) will outline details as to the protection of the archaeological sensitive areas, as identified by Carl Steen and Sean Taylor 2002 Archaeological Survey, in each timber harvest. In order to protect these areas they have not been identified in this management plan. If there are any activities that might adversely impact, as defined by the State Historic Preservation Office (SHPO) (refer to Page 6), the section of property that is listed in the National Register of Historic Places during forestry operations, activities will cease until consultation has occurred with the heritage preserve manager, HTA, and SHPO. A post harvest inspection will be made by SCDNR staff to make sure neither natural nor cultural resources have been disturbed.

Furthermore a performance bond will be required from the buyer that will ensure that the terms of the contract will be followed.

Prescribed Fire and Fire Breaks

A Certified Prescribed Fire Manager from the SCFC or the SCDNR will coordinate prescribed fires on CBHP. The main objective of prescribed fire on CBHP will be to restore and maintain the fire-dependent longleaf pine ecosystem. During the restoration period, burns may be conducted frequently to reduce hardwood competition for the longleaf pine seedlings. Once the seedlings are established, burns will be used for maintenance purposes and conducted periodically as needed to maintain this ecosystem. The season, intensity, and type of fire may vary to meet specific management needs. According to McKee et. al. (1985), "prescription burning activities have little impact on archaeological sites except to give greater [temporary] surface visibility."

In order to reduce impacts to both natural and cultural resources, the existing preserve roads were converted to firebreaks, as approved by Chris Judge, SCDNR HTA. The firebreaks will be maintained at a width and a depth necessary to contain fire. If additional firebreaks are needed and they cross the previously mentioned archaeological areas, then the preserve manager will consult this effort with the SCDNR HTA. To avoid altering the site's hydrology, harming the flora, fosorrial herpetofauna, or the cultural resources minimal soil disturbance will occur on the property.

According to the Longleaf Alliance (http://www.longleafalliance.org), aggressive competitive grasses and forbs can have detrimental effects on growth and success of a longleaf pine seedling. The additional stress may increase mortality or cause seedlings to stay in the grass stage longer and be subjected to brown spot needle blight or other diseases. Fire does little to reduce the competition of these grasses and forbs because they are only top killed and rebound quickly after a burn. Consequently, herbicides may be applied to assure the survival of the restored longleaf ecosystem.

Cultural Resources Protection

As previously mentioned, several archaeological sites have been found within the boundaries of CBHP and the museum tract. One of these sites is a "Prehistoric Indian Village –Arant's Field" and is listed on the National Register of Historic Places. A small section of this site occurs within the CBHP boundaries. According to S.C. Title 60, Chapter 12, "Agencies shall consult with the department [SHPO] when planning projects that might adversely affect those properties listed on the National Register of Historic Places…." A SHPO Project Review Form was submitted to John D. Sylvest (SHPO, SC Dept. of Archives and History, 8301 Parklane Road, Columbia, SC 29223, 803-896-6129), on August 30, 2005. A Project Review Form provides specific information about an undertaking and the Area of Potential Effects that will help the SHPO staff make recommendations regarding a project's potential to affect historic properties.

Although the Calhoun County Museum and Cultural Center property is not

required to consult with SHPO according to S.C. Title 60, Chapter 12, they have agreed to allow SCDNR to include the 5-acre inholding of land into the upland management strategy of this preserve. I believe this partnership will be beneficial to all parties. The preserve manager shall consult with both the HTA and SHPO for land disturbing activities that might "adversely affect" the section of property that is listed on the National Register of Historic Places.

What is an "adverse effect"? An adverse effect alters, directly or indirectly, the characteristics of a historic property that qualify it for inclusion in or eligibility for the National Register. An adverse effect diminishes the integrity of a historic property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties may include, but are not limited to:

- Physical destruction or damage to all or part of the property (for example, grading of an archaeological site or demolition of a building),
- Alteration of a property that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (for example, gutting the interior of a building),
- Removal of a property from its historic location,
- Changes to the setting of a historic property (for example, construction of a cell tower adjacent to a historic grist mill or the construction of an industrial park near a rural historic district), and
- Introduction of visual, atmospheric, or audible elements (for example, construction of a four-lane highway beside a rural farm complex or a branch bank in a residential historic district).

Carroll's Cemetery also occurs within the preserve's boundaries. All cemeteries are important features of South Carolina's diverse heritage. Cemeteries not only provide places that people can visit deceased loved ones and friends, they also yield information about our state's social, religious, artistic, and cultural heritage. All cemeteries are protected under the following laws: Destruction of desecration of human remains or repositories (S.C. Code 16-17-600), removal of abandoned cemeteries (S.C. Code 27-43-10, 27-43-30, and 27-43-40), and preservation of abandoned or unmentioned cemeteries (S.C. Code 6-1-35).

Invasive and Exotic Species

Wildlife Management

Feral hogs are not native to North America, but have occurred in many areas of the southeastern United States for several hundred years (Wood and Lynn 1977a & b, Wood and Barrett 1979). They are a pest species because of depredation on agricultural crops, amphibians and reptiles, eggs and young of ground-nesting birds, longleaf pine regeneration, competition with native wildlife species for mast, and as a disease reservoir, especially for swine brucellosis (*Brucella suis*), and pseudorabies (Wood and Brenneman 1980, Gipson et al. 1998). Although relocating feral hogs is illegal, it is not an uncommon practice in South Carolina.

Feral hogs are precocious and prolific breeders. Gilts come in heat at 8-10 months; gestation periods are short (112-115 days: about 3 months, 3 weeks, and 3 days); litter sizes are large (4-12: an average of 8 survive in SC); and sows can have almost 2 litters/year. Feral hogs are also nomadic. Thus, they are extremely difficult to eradicate. Public hunts are less practical for this small preserve; consequently, the feral hogs may be trapped or killed by SCDNR staff. This effort will be coordinated through the SCDNR's Wildlife Section.

Currently, the total population of feral hogs that occur on CBHP is unknown. However, hog signs (i.e., grubbing and mud wallows) indicate they are not restricted to the flood plains of the Congaree River. They are utilizing the upland habitat. This could be detrimental to the longleaf pine restoration effort.

Plant Management

Exotic species have the potential to pose significant threats to native species, and their introduction to heritage preserves is generally prohibited; however, they may be introduced as biological controlling agents. The SCDNR reserves the right to use either chemical or biological control. Biological control will be allowed only under the following conditions. First, the harmful exotic species must present a clear danger to native species. Second, the bio-controls must have proven efficacy against the targeted pest species. Third, the bio-controls must, through wide application, be known not to pose an environmental threat themselves. Pesticides may also be used to control or eradicate exotic species, if mechanical control methods are not practical or effective.

At the present time, SCDNR botanists have identified the Chinese Parasol Tree (*Firminana simplex)*, which occurs along the Bluff-River Walk Trail, as an immediate treat to this preserve. This exotic species is being controlled by a hack-and-squirt method. Although this technique is labor intensive, it allows the applicator to control the application of herbicide. Consequently, the impacts to the surrounding "desirable" flora are reduced.

South Carolina Department of Natural Resources staff, volunteers, or a contract botanist will monitor and document both desirable and undesirable plant species on an annual or as needed basis.

Education Center

The DFC encourages public usage for South Carolina's citizens, as long as such usage does not detrimentally impinge the primary objectives. Recreational activities include fishing, hiking, and plant and wildlife observation and photography. In addition to the preserve being open to the public for recreational use during daylight hours, the educational center will be made available to groups on a first-come-first serve basis. An Educational Center Committee was formed to help SCDNR determine the educational state standards and the appropriate use of this center. In order for a group to be considered, the primary focus of the meeting/gathering must be centered around natural or cultural resources, and a completed application must be submitted to

the Calhoun County Conservation District (904 F.R. Huff Drive, Suite 104, P.O. Box 528, St. Matthews, SC 29135, 803-874-3337) for approval 30 days prior to the use of the center (Appendix C). The Calhoun County Conservation District must receive approval from the SCDNR before issuing access to the preserve or educational center.

Visitation

Public recreation access on CBHP will be restricted to "foot-travel" unless approved to use the education center. The SCDNR encourages recreational activities such as fishing, hiking, and plant and wildlife observation and photography. The preserve also provides opportunities for research and serves as an outdoor classroom for nature study. Requests to work on the preserve must be submitted in writing along with a detailed research design to the SCDNR heritage preserve manager [SC Code Section 123-207]. Congaree Bluffs Heritage Preserve is open to the public during official daylight hours as provided in the HTP's Rules and Regulations (Appendix D). South Carolina Department of Natural Resource's Proposed Policy for Recreational Use of SCDNR Properties document also governs access and recreational use of this preserve. "If [SCDNR] staff finds that an existing use is not appropriate, the use must be modified so that it is appropriate or it must be terminated or phased out as expeditiously as practical."

Access

All roads on the preserve may be gated and closed to all public vehicular traffic in order to protect roads, plants and animals, and provide areas of solitude and isolation. The only exceptions will be made for the Mefford's, the Calhoun County Museum, South Carolina Electric and Gas Company, and any approved groups that use the educational center. Both the Mefford's and the Calhoun Museum will be issued keys to the first gate and allowed to access their properties.

All terrain vehicles (ATV) and off-road vehicles (ORVs) can cause negative impacts to habitat and wildlife populations (Williamson 1999) and cultural sites (Common Ground 1999), especially when operated off designated roads. Impacts include soil compaction, destruction of vegetation (Marvier and Smith 1997), erosion due to rutting, and disturbance of normal behavior (Wyatt 1988). They also destroy solitude and the sense of isolation, attributes that make heritage preserves special. Consequently, "no motorized vehicles shall be permitted on the property…" [S.C. Code Ann. §51-17-90.5e (Supp. 1995)] unless approved by the heritage preserve manager.

Boat Ramp and Other "Common" Property

Although no motorized vehicles shall be permitted on the preserve, the Mefford's share ownership with the SCDNR in a common area known as the "Bluff-River Walk Trial". Consequently, they are able to utilize this area as they see fit. This area will not be open to vehicular use because of the steep topography of the road and the primitive nature of the boat landing.

Information Signs, Kiosks, and Trails

In addition to a directional sign located at the intersection of Hwy 419/Fort Motte Road & Turkey Track Lane, a large informational sign, crediting all partners, will be erected near the preserve's parking lot. The preserve's boundaries were painted and heritage preserve signs have been posted. Boundaries will be painted and reposted on an as needed basis. Signs will be erected to mark the trails and sensitive areas. Emergency & educational information and property boundary & trail maps will be provided at each kiosk throughout the preserve.

Monitoring and Stewardship

The SCDNR staff will visit the preserve regularly and work with volunteers to maintain the preserve's integrity by controlling abuse and monitoring the property.

Currently, Dr. John Nelson and one of his students are working on a one-year general floristic survey across various communities and habitats for an entire growing season. At the same time, they are performing a seed bank study in the former stands of longleaf pine to predict how these areas will re-vegetate.

South Carolina Department of Natural Resources staff, volunteers, or a contract botanist will monitor exotic and rare plant species on an annual or as needed basis. Theft of native plants is a documented problem in the Carolinas (Stolzenburg 1993); consequently, the staff will monitor and investigate any man-made excavations.

Regulations

Close adherence to regulations outlined in the Heritage Trust Act [Title 51-17 – Parks, Recreation, and Tourism] and Chapter 123 Statutory Authority: S.C. Code Sections 50-11-2200 and 50-11-2210 are necessary to protect both the ecological and cultural integrity of this preserve. Inordinate degradation of any portion of the preserve may force the SCDNR to temporarily or permanently exclude the public from that area.

The use of metal detectors or metal/fiberglass probes to search for any objects below the ground surface is prohibited on Department land; moreover, digging or excavating is prohibited.

Enforcement

The SCDNR Law Enforcement Division (LED), plus other state and local law enforcement officials, have authority to enforce Heritage Preserve Regulations. [S.C. Code Ann. §51-17-130 (Supp. 1995)]. The LED shall enforce all preserve regulations. Other personnel of SCDNR who hold Deputy Law Enforcement Office commissions also have authority to enforce regulations and will assist the LED.

FUTURE ACQUISITIONS

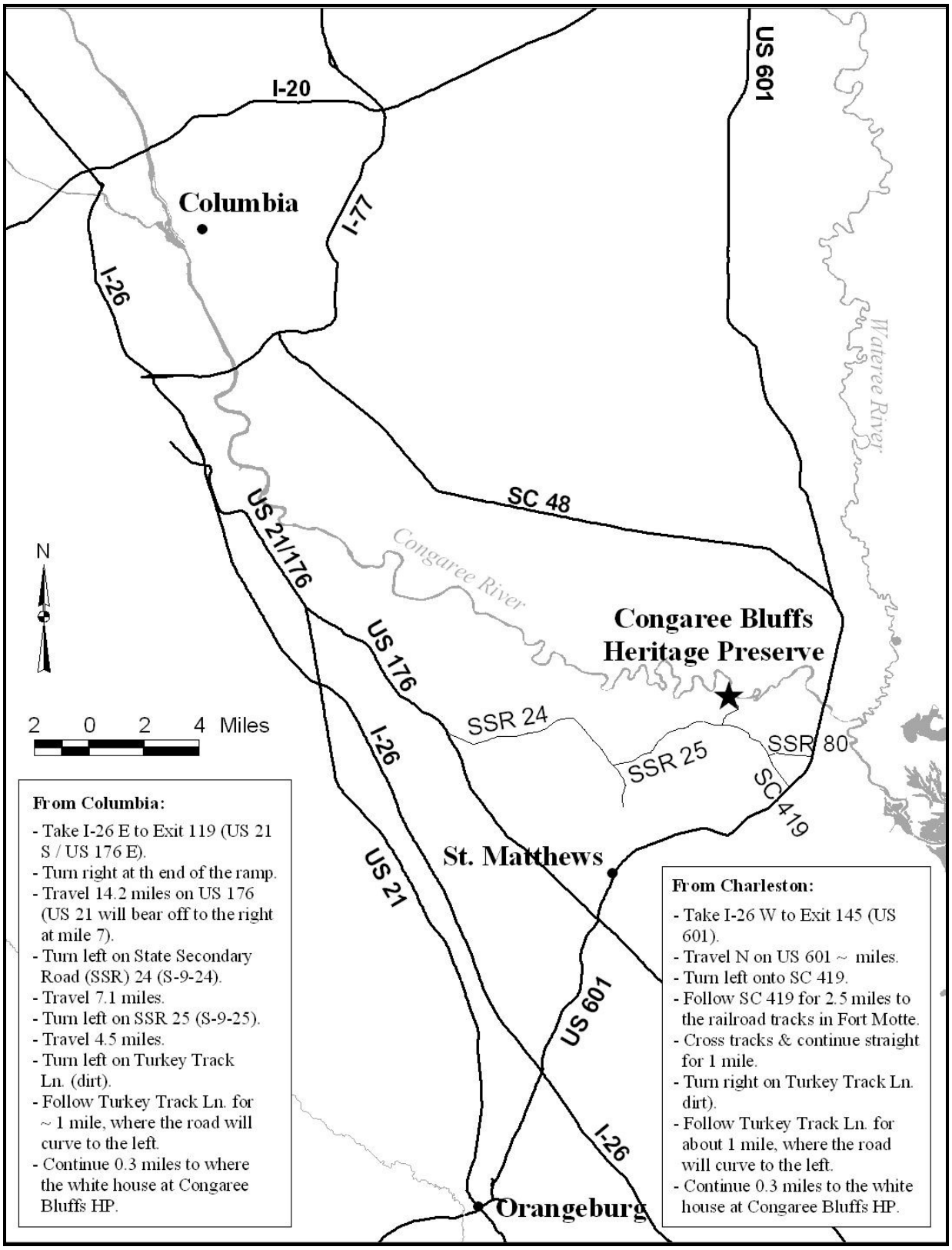
Certain tracts of land surrounding CBHP might make desirable additions. The SCDNR will be open to discussions with adjoining landowners about expanding the preserve.

ADDITIONAL REMARKS

According to the HTA [S.C. Code Ann. §51-17-80.5 (Supp. 1995)], "All state, federal, county, local, and private groups interested in the area of feature involved shall be allowed to have input into the proposed management plan." This plan was reviewed by relevant personnel of the SCDNR and outside experts (Appendix E) and was posted on the SCDNR's Website for public input.

Specific management actions will be implemented within the preceding management guidelines. However, the SCDNR recognizes that unforeseen management needs and opportunities may arise, and therefore reserves the right to implement action in such situations, as long as these actions (1) adhere to the guidelines of the Heritage Trust Act, and (2) further the primary objective of this plan.

This plan will be updated no less than every 5 years or as needed to meet the preserve's management goals. Pertinent deeds, plats, dedication agreements, and other preserve information are available for public inspection at the SCDNR office in Columbia. For more information on CBHP contact Region 3 Heritage Preserve Manager Brett M. Moule at P.O. Box 167, 1000 Assembly Street, Columbia, South Carolina, 29202, Phone Number 803-734-3886.



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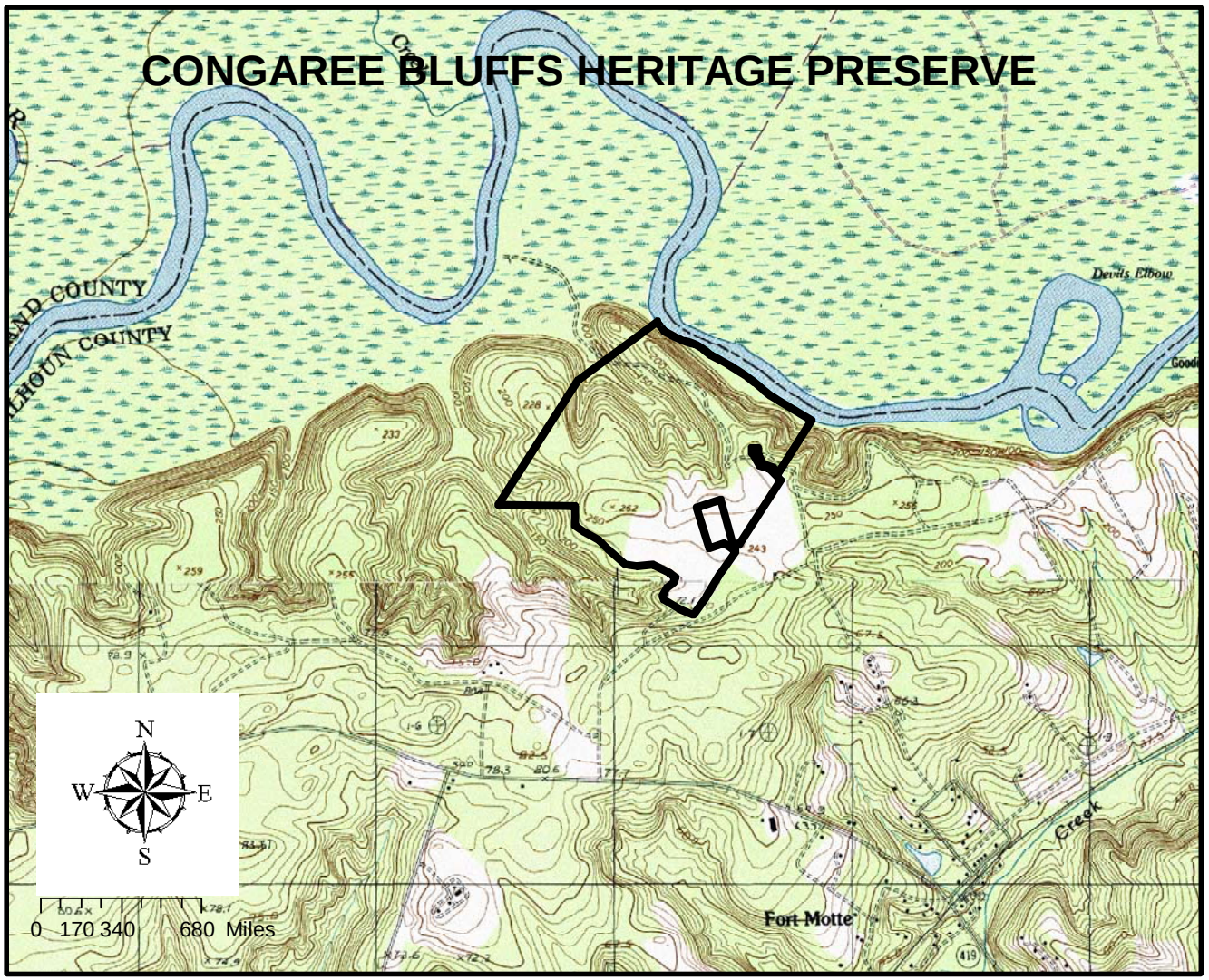

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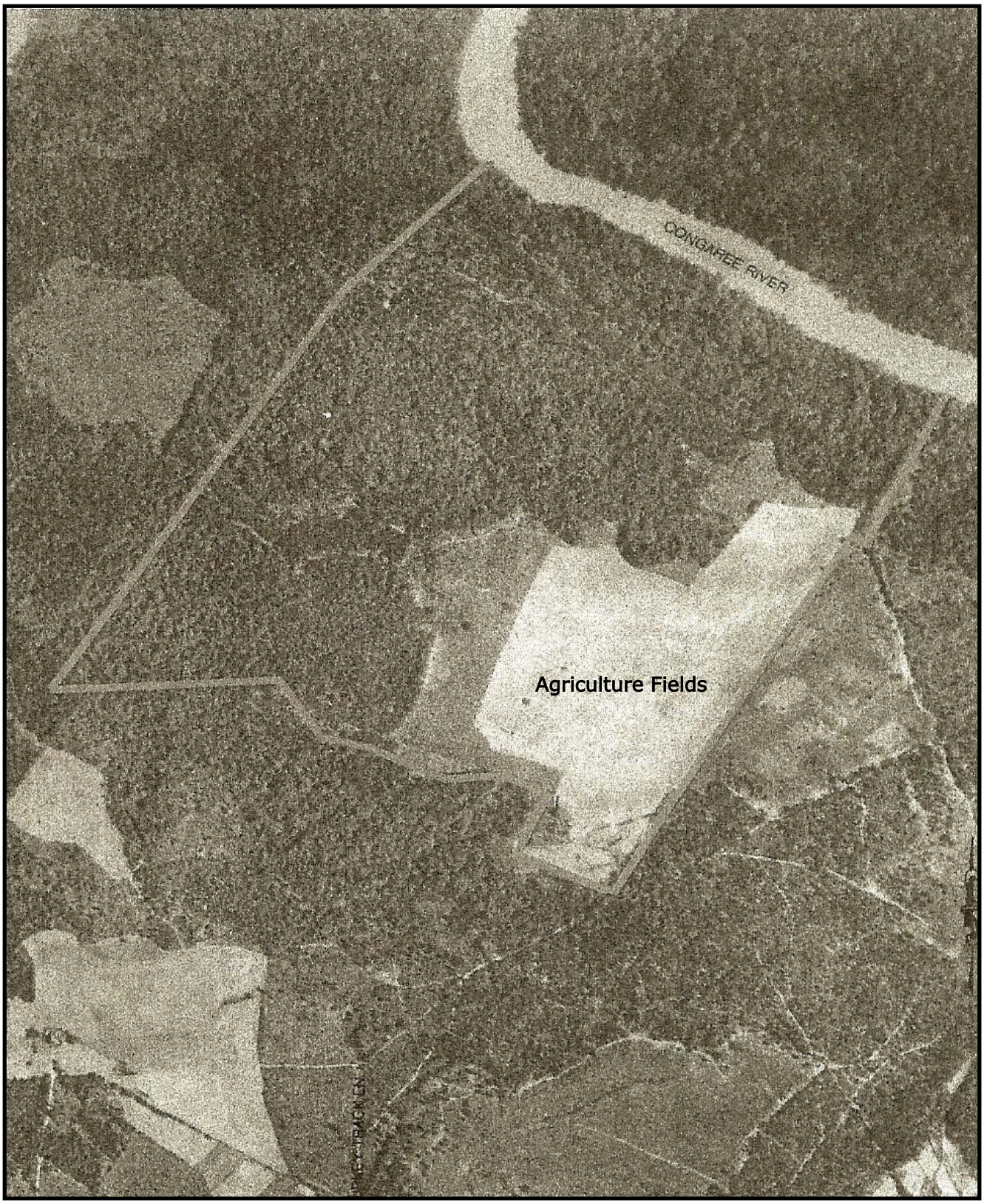

FIGURE 5 –1948 Aerial Photograph
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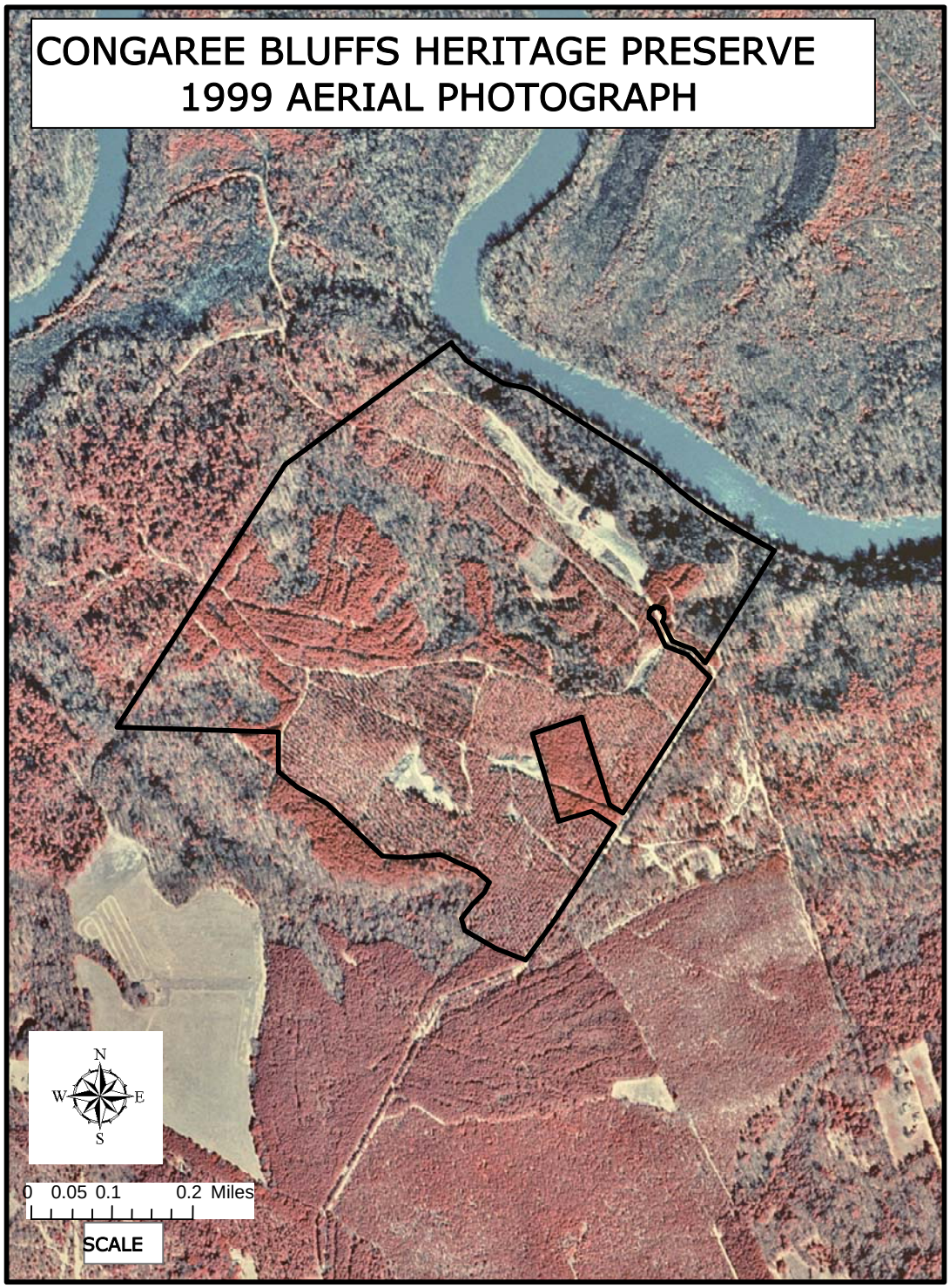

FIGURE 6

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APPENDIX A

Dr. John Nelson's 1986 Unpublished Memorandum

Congaree River Bluffs *809

Location: Calhoun County; Gadsden, S. C. and Wateree, S. C. 7.5' topographic Quads; adjacent to and south of the Congaree River floodplain, opposite the Congaree Swamp National Monument.

Acreage: ca. 850

Steep, relatively undisturbed bluffs border the Congaree River flood plain, or the Congaree River proper, beginning about at the juncture of Big Beaver Creek and extending east nearly to Goodin Cemetery, a distance of almost 12 miles. Although these bluffs vary considerably in terms of maturity of the plant communities present, all but a very few are basically undisturbed. There is no comparable stretch of undisturbed bluffs elsewhere in the coastal plain, or possibly even in the piedmont of South Carolina.

These bluffs, especially those that face due north, typically harbor mesic mixed hardwood forest. Beech, white oak, black oak and mockernut hickory are the dominant canopy species. Some bluffs and ravines harbor forests that may best be described as oak-hickory forest, primarily because of the complete absence of beech. Some ridge tops are cleared, others are in pine, and others are occupied by an immature, dry, oak-hickory community, the community that probably would predominate in the absence of man-induced disturbance. The adjacent floodplains contain relatively mature bald cypress - tupelo gum or bottomland hardwood communities. Large trees of a variety of species are scattered over the bluffs. Most of the very largest are cull trees, but some sections of bluff may never have been lumbered. Some individuals greater than three feet in diameter of all the following species are present; beech, white oak, swamp red oak, tulip poplar, sweetgum, swamp chestnut oak, Shumard oak, and willow oak. Most of the largest trees are of beech or white oak. A few areas are dominated by large, over-mature trees but most areas have over-mature trees scattered with younger trees, including pine in a few of the more gently sloping areas.

Shrub and herb diversity varies considerably with aspect on the same bluff and from bluff to bluff. Species diversity in general is not particularly high, primarily due to the relatively acid soils. Diversity seems to be lowest in areas with the canopy dominated by beech. One plant species of concern, Menispermum canadense (Canada moonseed), is found in two localities (Areas 2 and 3) at this site. Additional interesting or unusual herbs include Asarum canadense (wild ginger), Urtica chamaedryoides (nettle), Ligusticum canadense (lovage), Tradescantia hirsuticaulis (hairy spiderwort) and Amianthium muscaetoxicum (fly poison). Typical shrubs include Aesculus pavia (buckeye), Asimina triloba (pawpaw), Calycanthus floridus (sweet shrub) and Kalmia latifolia (mountain laurel). Mountain laurel is restricted to areas where a hard pan results in a perched water table; it is most abundant at eroded, nearly vertical cliffs near the bluff tops.

Bluffs in the western half of this site, west of Bates Mill Creek, have an elevational range of 100 to 300 feet; bluffs east of Bates Mill Creek have an elevational range of 100 to 230 (260) feet. Although a rich humus layer is present on most of the slopes, the soil below is often quite sandy and acidic.

and clayey land." Soil profiles are weakly developed; horizons are discontinuous and the soil is thin. Colluvial material often is present resulting in profiles that don't fit the typical concept of soils within the Lakeland-Vaucluse-Killian association.

Although some slopes are severely eroded, especially toward the ridge tops and the base of slopes that front directly on the Congaree River, there is good evidence to suggest that most of this erosion is natural. Erosion just below the ridge tops is common throughout the site and is related to the presence of an ironstone cap. Water flows along this irregular, impermeable cap and where it exits a steep erosion cliff often results. Area 6 has erosion cliffs along most of the bluff top. If ironstone is not present at the bluff top, erosion is usually not present, and if ironstone is present in the form of boulders rather than a broad lens, erosion is generally less severe. Wind-throw is the second major cause of natural erosion. Wind-throw is generally most severe on the exposed slopes immediately adjacent to the Congaree River, so these slopes typically are the most eroded slopes in this area. Some erosion is found in association with old logging roads and other access roads. A little erosion is present that can be attributed to past tree harvesting activities.

Sandstones other than ironstone are scattered throughout this site. On the lower slopes and many of the ravines, small outcrops of sandstone dominated by marine shell hash can be found. The calcium carbonate in the shells has been replaced by silicates, making this a sandstone and not a limestone. According to Dr. Lucille Kite, these outcrops are from the Paleocene geologic epoch (ca. 60 million years ago).

This site as a whole is impressive for the overall maturity of the forest communities and the general lack of disturbance. No comparable site exists in the coastal plain of South Carolina. The fact that most of this site lies across the river from the Congaree Swamp National Monument means that protection of this site will also mean additional protection for the Monument, which therefore adds to the significance of this protection project.

Although the site as a whole is impressive, there are some areas that are more impressive than others. Area 7, for example, shows no evidence of ever having been lumbered. The forest here is absolutely magnificent and should receive the highest priority for protection. At the other extreme are a few small areas that do not warrent protection because of the degree of disturbance.
Because this site is so large and the quality and significance of areas within it vary considerably, the site has been subdivided into smaller, more homogenous areas. These areas are briefly described and assigned a protection priority in the addendum following this brief summary. This breakdown should facilitate protection of this highly significant natural area.

Elements of Concern

PC - Mixed Mesic Hardwood Forest - Large, outstanding example
PS - Menispermum canadense - Of concern; status unresolved

Addendum: Brief descriptions of the seven significant areas comprising this site.

Area 1 (ca. 140 acres): Area 1 is located just south of Big Beaver Creek as it meanders across an extensive area of floodplain. Elevation ranges from 100 to 280 feet, with the steepest portions at the northwest end of the site. Toward the southeast, the topography is more moderate with the bluff gradually rising to about 300 feet. Ironstone rock is occasionally seen on the upper parts of the steep areas. A few large gullies were encountered that are apparently of natural origin; no unusual manipulation of the surrounding land was noted. Large trees, especially oaks and sycamores, are present in stream channels of some of these gullies. Fairly typical and mature Mesic Mixed Hardwood Forest dominates this bluff along its length. Loblolly pine is occasional toward the top. American beech is characteristic from about mid-slope down to the base of the bluff, with a reasonable diversity of shrub species present. Herbaceous diversity along the slope is not particularly outstanding except at the bluff base. The increased availability of water on the lower part of the slope, and within the adjacent swamp forest, has contributed to a high diversity in a localized strip of ground. Numerous boggy seepage spots, some extensive, are present here, with abundant grass/sedge cover. Indian cucumber-root, at least two violet species, several ferns, mats of Sphagnum, sweet-shrub, wild azalea, leucothoe, and an unidentified orchid (possibly Platanthera lacera, a state-threatened species), are present. The drier uphill slopes contain abundant windflower, cancer-root, wild yam, heartleaf, yellow corydalis, partridge-berry and, infrequently, wake-robin. Disturbance is restricted essentially to the base and the top of the bluff section. Some forestry has occurred at the northwest portion of the site near its highest point, and it may be that more of the above-summit area is in the planning stage for site preparation for pine planting. An unimproved dirt road follows the base of the entire bluff; heavy equipment has been moving around along this road, and some gouged-out spots occur on the bluff side of it, with accompanying tree removal and road widening. A dirt access road into the floodplain is located on the southeast edge of this site. A hunting cabin is found at the base of the bluff, about a third of the way northwest along the mapped site from its southeasternmost edge. This site warrants a priority level designation of "Medium."

Area 2 (ca. 210 acres): Area 2 is a large stretch of very steep slopes, partially dissected here and there by gullies and stream drainages, mostly facing directly on the river without an associated floodplain, other than a narrow levee. The most eastern and western ends of this site are associated with fairly wide flood plains, however, and have more moderate slopes. The central portion of this site affords a truly spectacular view over the Congaree River and into Richland County. Its exposure, for the most part, is north-northwest. Mature Mesic Mixed Hardwood Forest is found all along this system, with American beech nearly reaching the summit of the bluff itself. The subcanopy and shrub layers here are very diverse, including Ostrya virginiana, Carpinus caroliniana, Asimina triloba, Vaccinium sp., Aesculus pavia, Hydrangea arborescens, Viburnum sp., Kalmia latifloia, Cornus florida, and Staphylea trifolia. Herbaceous diversity is highest near the base of these slopes, especially in the vicinity of the associated flood plain. Bloodroot, mayapple, yellow corydalis, jack-in-the-pulpit, maidenhair fern and

canadense), an uncommon viny species usually found in rich woods over basic soil, is present in abundance on the east edge of this site. Disturbance along this region is very limited. Trash is present along the river bank in spots, but much of this has probably floated down during previous periods of high water. An unimproved dirt road is present at the base of the northeast-facing slope to the southeast, and an old road bed is found just uphill from that. Neither of these roads seems to have significantly affected the surrounding forest. The "D"-shaped flood plain adjacent to the southeastern bluff has had some agricultural activity take place, with plowed fields next to the river itself. A pine plantation and adjacent cleared field occur at the very top of the hill overlooking the bluff complex. Its large size, variation in topography, relative undisturbedness, association with flood plains and resultant high floristic diversity allow this site to be ranked as 'High' priority.

Area 3 (ca. 90 acres): Area 3 on the Gadsden topo quad is entirely associated with a significant flood plain, and is somewhat dissected with variously-sized gullies and ravines. Exposure here is almost directly north, except toward the eastern edge, where part of the bluff faces northeast. The highest portion of this bluff (300') is at the central point of this site. Ironstone is scattered along the bluff near its summit, and some large boulders may be found. A form of sandstone with abundant fossilized shell material, resembling coquina, is even more abundant, mostly at midslope and uphill. Mesic Mixed Hardwoods are found throughout the length of this complex, with an abundance of old, gnarled beech trees, many of which are either leaning or fallen, and hollow. Beech is most common along this site from about midslope downhill. Additionally, tulip-poplar is abundant as a major canopy species. Again, herbaceous diversity is richest toward the bottom of the bluff face at the ecotone into the flood plain woods, with yellow corydalis, bloodroot, Geum, alum-root, Uvularia and giant chickweed present. Moonseed is present in great abundance, especially toward the flood plain side of the adjacent dirt road. The uphill slopes of the bluff contain much partridge berry, heartleaf, bracken-fern, woodrush, Tradescantia, Phlox, Sanicula and an unidentified milkweed. Mechanical disturbance in this area is practically absent, except for the road at the base of the bluff. However, nearly the entire bluff system at this site has been burned, probably in the past winter or spring, and numerous charred shrubs and remains of ground cover species are present. This site merits a ranking of 'Medium' priority.

Area 4 (ca. 145 acres): One large stream, Bates Mill Creek, and three intermittent streams divide this area into three major bluffs. Although large trees are widely scattered through this area, the mesic mixed hardwood forest in this area in general is considerably less mature than in other areas at this site. Pines are scattered through much of this site and are dominant in a few small areas. The larger pines appear to have been selectively cut from the westernmost bluff in the recent past. This area is somewhat more eroded than other areas at this site and not all of the erosion is related to natural processes. The slope toward the middle of the middle bluff is quite mature and is as mesic as any of the Congaree bluffs south of Bates Mill Creek. Shrub cover and herbaceous cover in particular is quite high here. Hog peanut (Amphicarpa bracteata) is probably the most abundant herb; wild geranium (Geranium maculatum) and maidenhair fern (Adiantum pedatum) also are abundant. Some ironstone lenses, ironstone rocks and marine-shell-hash sandstone are present. Relatively mature and undisturbed bluffs continue for at

additional mile up the east side of the ravine associated with Bates Mill Creek. This area warrants the lowest protection priority of the seven areas included in this site.

Area 5 (ca. 130 acres): Deep ravines associated with two small, but permanent, streams divide this area into three, main bluffs. All three bluffs harbor mature forests and disturbance is general is slight. A few erosion cliffs are present at some of the bluff tops, but little or no erosion is evident on the lower slopes. Wind-throw is infrequent and tends to be concentrated in a few small areas. Large trees are scattered throughout the area and a few pockets of especially mature forest are present. Old road beds extend into the ravines between the bluffs and run along the base of the bluffs. Erosion appears to be somewhat more evident in the ravines than on the main bluffs. Beech dominates the north-facing slopes but often is absent or present in minor amounts on the northeast and northwest slopes and in the major ravines. Buckeye and sweet shrub dominate the generally sparce shrub cover on the north slope. Thick zones of mountain laurel are found on some of the drier upper slopes and in some of the ravines. Herbaceous diversity generally is low; Tradescantia hirsuticaulis, Ligusticum canadense, and Trillium catesbaei are some of the more interesting species present. Relatively mature and undisturbed slopes continue up into some of the ravines well beyond the boundaries of this area. Because of the general forest maturity and relative lack of man-related disturbance, this area warrants a "Medium" protection priority.

Area 6 (ca. 65 acres): Much of the mesic mixed hardwood forest here fronts directly on the Congaree River on a narrow flood plain. Wind-throw is evident throughout the area and most of the slopes adjacent to the ridge tops consist of short erosion cliffs. Lenses of ironstone are obvious and some boulders are present as well. Areas fronting directly on the Congaree River also are quite eroded toward the slope base. Slopes bounded by flood plain often are covered with a rather diverse mix of floodplain and bluff species. Asarum canadense land Urtica chanaedroides are some of the more interesting species here. Shrub cover is dense in parts of this area and Asimina triloba (pawpaw) and Aesculus sylvatica (buckeye) are the most abundant species. A few shrubs of Aleurites fordii (tongue oil tree) are present, indicating the escape from cultivation of this poisonous, introduced species. The northwestern tip of this area is dominated by very large trees, especially beech and oak, but large trees are scattered through the remainder of this area. Wind-throw and selective cutting probably are responsible for the very uneven aged forest here. Some shell-hash-dominated sandstone is present on the lower-mid slopes. An access road to a private boat landing on the Congaree River now runs down the side of a small ravine just west of the only major ravine in this area. Some Fuller's earth is outcropped on the upper slope near the middle of this area. Because of the general forest maturity and lack of man-related disturbances, this area warrants a "Medium" protection priority.

Area 7 (ca. 27 acres): The western half of this area may harbor the most spectacular beech bluff (Mesic Mixed Hardwood Forest) in South Carolina. Beeches 2.5-3.5 feet in diameter are the overwhelming canopy dominants and, with some large white oaks and swamp red oak, form a closed canopy 100-110 feet tall. The bluffs are short, but steep and erosion, natural or otherwise, and wind-throw are minimal. Hop hornbeam (Ostrya virginiana) and dogwood

for some areas of high herb cover at the base of the bluff. *Urtica chamaedryoides* is one of the more interesting herbaceous associate. Part of the western half is bounded by flood plain and part by an old oxbow of the Congaree River. A small seepage is present and shows evidence of old moonshining operations. A seldom-used trail winds down this bluff from the dirt road at the ridge top. Part of the eastern section of this area directly fronts on the Congaree River and the slopes here are severely eroded. The canopy is dominated by over-mature beech and is closed except where wind-throw and erosion have been severe. This section was only seen from a boat on the Congaree, so a more in depth survey should be conducted during negotiations with the landowner(s). This site warrants a "High" priority for protection.

APPENDIX B

Dr. John Nelson's 1987 Significance of Congaree Bluffs Unpublished Memorandum

South Carolina
Wildlife & Marine
Resources Department

James A. Timmerman, Jr., Ph.D.
Executive Director
W. Brock Conrad, Jr.
Director of
Wildlife and Freshwater Fisheries

MEMORANDUM

DATE: 25 FEBRUARY 1987

TO: D. A. RAYNER

From: JOHN B. NELSON JBN

Re: SIGNIFICANCE OF CONGAREE RIVER BLUFFS

The presence of steep bluffs on the south side of the Congaree River and their associated plant communities have attracted some attention from naturalists for many years. Recently, detailed field work within the botanically most appealing areas of this system has increased our awareness of the potential significance of it. The following compilation of our knowledge of bluffs in this area is presented as evidence of their outstanding significance.

The Saluda and Broad Rivers, both Piedmont brown-water streams, come together on the west side of Richland County to form the Congaree River. At the fall-line, large rivers leaving the Piedmont usually begin wide meanderings, as visible evidence of their reduced stream velocity. Such is the case with the Congaree, which is quite sinuous between the fall-line and its confluence with the Wateree. The north side of the Congaree (Richland County) is characterized by an extensive flood plain, historically dominated by magnificent cypress-gum swamps and bottomland hardwood forests. Naturally-occurring river levees are found along much of the Congaree, and the floodplain contains many oxbow lakes, remnants of the ancient stream channel. The most significant area of this floodplain association now benefits from the protection afforded by its inclusion within the boundaries of the Congaree Swamp National Monument. The south side of the Congaree River, however, presents a radically different system.

Bluffs indicated here as significant comprise about 850 acres, forming a nearly continuous stretch from a point just south of Beaver Creek eastward for about twelve miles, to a site just northwest of Ft. Motte. Elevation of this system ranges from 100' at the base of the bluffs to 250'-300' at the tops. Steepness and slope aspect vary a great deal here. At least one forested segment of this complex rises to 300' over a linear distance (from the river) of about 500'. On certain stretches along this bluff system, nearly vertical cliffs occur which are devoid of woody vegetation. These cliffs are the result

Rembert C. Dennis Building ☐ P. O. Box 167 ☐ Columbia, South Carolina 29202 ☐ Telephone: 803-734-3886

or natural erosive forces. Exposures along this bluff complex range from west to north to southeast; the aspect of exposure is predominently northeast. Intermittent narrow stream channels occasionally dissect this steep system, and some of the channels are dilated toward the slope base. Soils along these bluffs are apparently acidic, with a pH range of 4.5 to 5.9 (Fitzpatrick, Clonts and Batson 1977), presumably developing from the underlying sandstones. These resistant silicified limestones (also known as "ironstone") cap much of the bluff system, and occasionally occur as large boulders. Isolated boulders, after being dislodged from near the top are found downhill. It is unlikely that this fossiliferous sandstone, which is frequently seen on ridges within the fall-line sandhills, is older than Oligocene in age (Maybin 1987). Deeper metamorphic rock at this site has probably had very little to do with the present soil characteristics. Available soil classification refers to these sites as being "Sandy and clayey land", either sloping or moderately steep (USDA 1963). The south side of the Congaree River in this area has practically no flood plain. The most extensive flood plains that are present are found in association with bluffs of moderate steepness.

Two major forested plant communities dominate on these slopes (Nelson 1986). An Oak--Hickory Forest occurs at the slope summits and just downhill. This community seems to vary little along the length of the bluff system. Variation in its canopy and subcanopy makeup is probably due to changes in exposure. Quercus alba, Q. velutina, Carya tomentosa and C. glabra are frequent in this community, and Pinus taeda is present on the highest ridges. Cornus florida, Liquidambar styraciflua and young canopy trees form most of the subcanopy in these woods, with Cornus florida and Viburnum rufidulum present in a tall shrub layer. Herbaceous flora is sparse. In discontinuous but frequent bands may be seen very abundant Kalmia latifolia, especially approaching the tops of the bluffs. Downhill from the Oak--Hickory Forest and to the base of the bluffs is a broad expanse of Mesic Mixed Hardwood Forest. This community is best developed, in terms of canopy development and number of species, along the middle and lower slopes. Dominant canopy species are Fagus grandiflora, Quercus velutina, Q. rubra, Q. phellos, Liriodendron tulipifera and Carya tomentosa. The subcanopy is heterogeneous, including Acer rubrum, Cornus florida (mostly in drier places), Carpinus caroliniana, Ostrya virginiana, Asimina triloba and young canopy species. Shrubs include Lindera benzoin, Calycanthus floridus, Aesculus pavia, Euonymus americana and some Myrica cerifera. Hydrangea arborescens is uncommonly seen at this site. The herbaceous flora of these bluffs is rather typical of Mesic Mixed Hardwoods. A number of families is represented, and many of the species involved are spring-bloomers. The highest density of flowering herbs occurs toward the slope bases, especially at the ecotone joining whatever floodplain might be present. Commonly seen herbs include Medeola virginiana, Thalictrum thalictroides, Conopholis americana, Hexastylis arifolia, Viola affinis, Trillium catesbaei, Mitchella repens, Corydalis flavula, Podophyllum peltatum, Sanguinaria canadensis, Arisaema triphyllum, Heuchera americana, Tipularia discolor, Geum sp. and Phlox sp. None of these species is particularly rare for this part of South Carolina. Some others, however, are certainly only infrequently encountered. These are Urtica chamaedryoides, Tradescantia virginiana, Ligusticum canadense, Asarum canadense and Menispermum canadense. A third community, Bottomland Hardwoods, is found along some of the wider floodplains at the base of the bluff system. This community is not nearly as well-developed here as it is on the opposite side of the river, but contains most of the same canopy species, especially Nyssa aquatica, Quercus michauxii,

Q. lyrata and Liquidambar styraciflua. Shrubs at these wet sites, especially if associated with seepages from the bluff, include Rhododendron viscosum, Calycanthus floridus and Leucothoe axillaris. Wetter spots dominated by Taxodium ascendens and Nyssa aquatica together do occur, but in small areas. These sites approach the Bald Cypress--Water Tupelo Swamp community which is richly represented on the north side of the river.

It appears that only limited disturbance has affected this complex of river bluffs. Limited forestry has apparently been the only man-caused source of disturbance here. The bluffs themselves are sufficiently steep to preclude most lumbering, and it is only at the summits that tree-cutting is now taking place. Natural wind-throw has been a frequent natural cause of forest openings here; several old, hollow beech trees have been seen on the ground, along with other hardwoods. In general, the Mesic Mixed Hardwood Forest dominating this bluff complex is in excellent condition, with many of the largest beeches and oaks approaching 2.5' to 3.5' dbh.

Various factors support the high importance placed upon this bluff complex as a natural area. Of particular significance is its association with the Congaree Swamp National Monument. Dr. Ross Clark of the Morris Arboretum, who has played a large part in the assessment of many National Natural Landmark candidate sites in the Southeast, asserts (1987) that the bluffs naturally form a protective buffer for the broad flood plain of the National Monument. His contention is largely repeated by Dr. Albert E. Radford, a noted botanist from UNC-Chapel Hill, who has developed some of the most influential assessments of natural areas in the Southeast. Radford (1987) claims that the size of this bluff complex and the condition of its resident dominating natural community make it outstanding, without regard to other features. Within their treatment of Piedmont areas as a screening for recognition as natural landmarks, Radford and Martin (1975) list few similar sites comparable in size. Brandywine Creek State Park (Newcastle County, DE), with about 700 acres, is floristically similar to the bluffs on the Congaree, but is not associated with a major river channel. Other floristically comparable Piedmont candidates include Long Green Creek (Baltimore County, MD) with 250 acres, Herrontown Woods (Mercer County, NJ) with 400 acres, Nockamixon Rocks (Bucks County, PA) with about 250-350 acres, some of which is associated with diabase, and Burling Woods (Fairfax County, VA) with 250 acres. Two additional sites in Virginia (Big Otter River Hemlock Slope, 50 acres in Campbell County, and the James River Arborvitae Bluff, 150 acres in Buckingham County) are floristically similar to the Congaree River Bluffs. The paradoxical occurrence of apparently calciphilic plant species on acidic rock at the Congaree Bluffs, as pointed out by Radford (1987) is duplicated at the last two mentioned Virginia sites. Additional potential landmark sites that are at least floristically similar to the Congaree Bluffs are Fernbank Forest (DeKalb County, GA) with 60 acres, Pumpkintown Creek (Bartow County, GA), with undetermined acreage, Flower Hill Slope (Johnston County, NC) with 20+ acres, Occoneechee Natural Area (Wake County, NC) with 50 acres, Octoraro Creek (Chester County, PA), with undetermined acreage, and the Tye River Hemlock-Beech Slope (Nelson County, VA) with 12 acres. The potential landmark described by Radford and Martin (1975) most nearly like the Congaree Bluff system is probably the Piedmont Beech Natural Area (50 acres) in Wake County, NC. The potential landmark sites described above, as similar as they may be

APPENDIX C

Educational Center Application

******** DRAFT ********

Congaree Bluffs Heritage Preserve
Educational Center
Calhoun County, South Carolina
REGISTRATION FORM

In order for a group to be considered, the **primary focus of the meeting/gathering must be centered around natural or cultural resources**, and a completed application must be submitted to the Calhoun County Conservation District for **approval 30 days** prior to the use of the center. This form does **NOT** automatically register your group. **You must receive a confirmation letter in order to be officially registered.**

Group or School Name	
Address	
Contact Name	
Phone #	
Contact Hours	
Program (s)	
Grade Level (if applicable)	
***No. of individuals (including chaperones)**	
Available Dates	1st choice
	2nd choice
	3rd choice
Special Needs	

***the maximum number of individuals cannot exceed 50 within the educational center based on fire safe standards.**

Groups may use the property without a guide, but will **NOT** have access to the Educational Center. The preserve **MAY NOT** be used for fundraising purposes. The **trails** on this property are **NOT** wheelchair accessible.

Please complete this form and return to the attention of Margaret Thornton (803) 874-3337 ext. 3, Calhoun Soil and Water Conservation District, PO Box 528, St. Matthews, SC 29135.

Each group is responsible for carrying home each item that they bring to the preserve and make sure trash has been properly disposed of.

_____ _____

Sign Date

For Official Use Only:

APPENDIX D

Heritage Preserve Rules & Regulations

Congaree Bluffs Heritage Preserve

Regulations

Visitation and use of this Heritage Preserve are governed by regulations to promote public enjoyment of the land while preserving the features that make it special. Written below is an abbreviated version of the regulations. Additional regulations apply: (http://www.scstatehouse.net/regs/2685.doc). Please contact South Carolina Department of Natural Resources (SCDNR) at 803-734-3893 for more information on the regulations for use of this preserve. Please report violations to 1-800-922-5431.

1. Heritage preserves are open for public use from one hour before sunrise to one hour after sunset unless otherwise posted or publicized. Exceptions may occur for a special hunting season or field trip, in designated camping areas, or for approved research or other projects.
2. Parking is allowed only for preserve visitors and only in designated areas (which may be parking lots and/or roadsides, depending on the preserve). Any other parking is prohibited. No vehicle shall block any road, regardless of whether the road is gated.
3. Collection, removal, or possession of, or damaging or destroying any nongame animal, plant, rock, fossil, artifact or ecofact, or the possession of a metal detector on a Heritage Preserve are all prohibited without written permission from the SCDNR.
4. No person shall abuse, damage, deface or destroy land, structures, signs or improvements on this preserve.
5. There shall be no placement of trash, debris, rubbish, waste, or chemicals on the preserve.
6. The consumption or display of any alcoholic beverage while operating or riding as a passenger in any vehicle and public drunkenness is not allowed. Alcoholic beverages may only be consumed by a person of lawful age only while camping at a designated campsite.
7. Camping and fires are not permitted unless areas have been designated or special written permission from SCDNR has been granted.
8. All terrain vehicles (ATVs) are prohibited on all Heritage Preserves.
9. Motorized vehicles are allowed only on designated roadways. Bicycles, horses and other conveyances are allowed only on designated trails of specified preserves.
10. Hunting is allowed only on designated preserves and only in accordance with Wildlife Management Area regulations.
11. Firearms are not allowed, except on heritage preserves designated as Wildlife Management Areas and then only in accordance with Wildlife Management Area regulations, or as otherwise provided by state law. Target and other

practice shooting are prohibited.
12. No plants, animals or other organisms may be introduced on the property.
13. All or part of a Heritage Preserve may be closed to the public to protect a species of concern, or natural, cultural, historical, or archaeological features.
14. Violators will be prosecuted.

Please Note:

- Hunting is prohibited
- No trash receptacles - take your trash out with you.
- Bring your own drinking water
- No public facilities
- No plant, animal, artifact, or any other natural or cultural material may be taken or disturbed
- ATV's and other motorized vehicles, camping, and fires are prohibited
- Not wheelchair accessible

APPENDIX E

List of Reviewers

List of Reviewers

Jamie Dozier
Region 4 Heritage Preserve Manager

Haven Barnhill
Unit 3C-Wildlife Biologist

Osborn E. (Buddy) Baker, III
Region 3 Coordinator

Timothy L. Ivey
Chief of Regional Projects
Wildlife Section

D. Breck Carmichael
Deputy Director
Division of Wildlife and Freshwater Fisheries

Barry Beasley
Director
Habitat Protection

Bert Pittman
Heritage Trust Botanist

Chris Judge
Heritage Trust Archaeologist

Congaree Bluffs Heritage Preserve Management Plan

Submitted by:

_____

Brett M. Moule Date
Region 3 Heritage Preserve Manager

_____

Johnny P. Stowe, Jr. Date
Region 2 Heritage Preserve Manager

Approved By:

_____

Osborn E. (Buddy) Baker, III Date
Region 3 Coordinator

_____

Tim Ivey Date
Chief of Wildlife

_____

D. Breck Carmichael, Jr. Date
Deputy Director

_____

Julia E. Krebs Date
Chair –Heritage Trust Advisory Board

_____

Mike G. McShane Date
Chair –Department of Natural Resources Board